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The impact of marketing costs on the revenue and income of the broiler fodder supply equipment distributors

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SUMMARY

The marketing activity of the various market players is not only an organizational but also an economic question. Both in the fields of organization and material expenses (marketing costs) the basic aspect is to increase one's competitiveness in the market and finally the revenue and income of the sector.

Broiler production is almost the only sector of animal husbandry that increased its output in the last decade. This sector is also special due to the fact that it is almost completely mechanized. It is so despite that one part of the farming units (some 50% of those farming units according to literature) have technical equipment fulfilling the modern requirements. The growth of the sector itself as well as the inevitable replacement of out of date equipment is a potential opportunity for the equipment distributors.

The smooth supply of the potential demand for equipment existing in the sector requires an appropriate market activity from the distributors where the basic element is efficient marketing. Despite the obvious differences in the marketing strategies of the two companies we studied representing two thirds of the sales of Hungarian broiler fodder supply equipment they have the same primary objective, which is the increase of their market share. From the survey with questionnaires answered at the companies during the period of 2006–2011, they have a different opinion on the priority ranking of the main aspects of their marketing strategies. As a consequence, the amount spent for marketing activities is also different. Both companies strive to have a return of the marketing expenditures in their earnings. The examination results of cost efficiency prove that in both companies there is a stronger than medium connection (correlation) between their marketing costs and their sales revenue and earnings. Since these connections can be described by quadratic functions, there is a chance to optimize marketing costs (under given conditions).

Keywords: marketing strategy, distributors of fodder supply equipment, marketing cost, sales revenue, income, calculation of correlation, competitiveness.

INTRODUCTION

The approach and study of competitiveness is a difficult exercise at both the company and the product level. It is an even more complex question with agricultural products, technologies and equipment. This can be one of the reasons that the economic relations of the housing systems of animal husbandry are among the poorly researched fields of science. No detailed study, in-depth analysis of this subject has yet been done at least in Hungary. However its usefulness in the current and future situation of the poultry sector is unquestionable given the expected strengthening of the competition in the market.

Modern equipment for increasing efficiency has a direct impact on the production results. The globalization present in the marketing of these products increases the role of the marketing strategies of the manufacturers and distributors. The effect of the distributor's marketing strategy on competitiveness has a direct impact on the business on the business results (revenue and income) of the distributors. To keep one's position and to expand (develop) in the even more competitive market can only be done by applying an effective (efficient) market strategy. Marketing activity has a significant cost commitment that must earn a return – at least in the long term.

One part of the examinations done in connection with the analysis of the marketing activities, marketing strategies of the two broiler fodder supply equipment distributors aimed at the assessment of the main aspects of the marketing strategies applied by the examined companies. Based on the results of the assessment the marketing strategy of company "A" is to build a private brand, which is done by emphasising the importance of the own services offered (services not linked to the foreign supplier of the broiler fodder supply equipment) but at the same time using limited marketing communication tools. Company "B" being a representative with an exclusive distribution right, making good use of the marketing support provided by the foreign supplier opts for the use of a much wider range of marketing communication tools, as it believes in its significance in value creation. The special importance of the technical parameters of the product and of personal sales has been given a high ranking by both companies.

The other part of the examinations aimed at the examination of the impact of the marketing expenses on the hypothesis of the following: *in case of the national broiler fodder supply equipment distributors marketing and expenses allocated to marketing have different emphasis within the company activities, which has a significant impact on the profitability of the companies.*

One of the objectives of the examinations done with the involvement of two national market leading companies for a period of six years (2006–2011) was the analysis of the extent to which their marketing expenses were recouped in the earnings of the companies. An especially interesting result of the examinations is that both of the companies are competitive despite their different marketing strategies. That can also be seen from the fact that they kept their market leading positions throughout the economic crisis of 2008–2009. The main aim of this study is to exploit the impact of the marketing expenses on the profitability (revenue and income) of the two broiler fodder supply equipment distributors and examine the relation, if any, among those.

LITERATURE REVIEW

To increase the market competitiveness of the broiler sector, new investments in technical equipment are required complying with the newest requirements of the sector. Because the price of the equipment is high (and continuously increasing), the amount of the investments depends on the actual economic and market circumstances (*Pazsiczki* 2003). For the sellers and buyers in the market it is important to know these changing conditions in order to determine the most appropriate market behaviour. On the sales (distributor) side, the form of this is the marketing strategy of the distributors.

Marketing – with special attention to marketing strategy – is part of the corporate business policy and corporate marketing strategy. Success in the market is achieved by understanding and satisfying the needs of the consumer (user). Thus marketing strategy is the most important tool to improve competitiveness (*Parragh* 2011).

Key to success is to offer a product to the market that satisfies the market needs to the greatest extent while creating a maximum customer satisfaction as well (*Kotler and Keller* 2006).

According to *Olach* (1997), marketing planning is part of strategic planning; hence it must become a continuous process reacting to the fast changing market circumstances. Forming a mature marketing strategy is preceded by an extensive strategic analysis. The aim of the strategic planning is the exploitation of the actual situation of the company (status quo). The forming of the future, forming of the marketing strategy may start based on the analysis of the marketing environment. When setting the price of the product, when forming the price strategy the principle of price setting must be decided as price is a crucial element in competitiveness. (*Vágási* 2001) Based on the directives of *Porter, Rekettye* (1999) considers the price policy and the financial situation of the company as especially important among the dimensions of competitive strategy. He emphasises that during the competitor analysis those items must be identified that represent some kind of advantage compared to the competitors.

The strategic goals of marketing are the followings: defending the current (market leading) position, increasing of the sales volume and/or profit, obtaining a market leading position, coverage of the whole market, etc. (*Katona* 2010).

In the literature, the specialists consider the gaining and keeping of a competitive advantage towards the competitors as the most important task of a marketing strategy. Instead of comparative advantages, *Porter* (1993) highlights the role of competitive advantages against the competitors that serves as the analysis of corporate competitiveness (for instance a cost advantage based on innovation).

According to both *Kozma* (1995) and *Botos* (2000), corporate competitiveness is the result of the accumulated competitiveness of the products that is to say that the basis of all competitiveness is the competitiveness of the products.

MATERIALS AND METHODS

During the expert's interviews and questionnaires filled in during the personal interviews (hereinafter called surveys) data used for the analysis of the correlation between the

marketing costs, revenue and income has been collected at two national companies dealing with the distribution of broiler fodder supply equipment during the period of 2006–2011. The statistical evaluation of these was done with the help of the Excel programme.

The available data series of these six years did not allow the analysis of significance (analysis of variance) normally used in cases like this. However, the analysis of the relation did convincingly prove the connection, which expresses the impact of marketing costs on revenue and income:

- for this we have calculated coefficient of correlation as well as coefficient of determination expressing the strength of the connection;
- in order to examine the connection we have determined the regression function (where the independent variable – input – is the marketing costs of the examined years; the dependent variable – output – is the sales revenue as well as income of the examined years);
- we have done the examination of time variation of each input and output factor by fitting trend functions as well as by moving average.

RESULTS

The first the correlation between the marketing costs (x) and the revenue (y_1) and then the correlation between the marketing costs (x) and the income (y_2) has been analysed using the data series of three years collected from the two companies (companies "A" and "B"). The examined period (2006–2011) was a period of relatively stable economic conditions which ensures reliability. The disadvantageous effects of the crisis that started in 2008 on the market turnover only occurred after 2010, which may distort the data for the period of 2010–2011 (*Figure 1*).

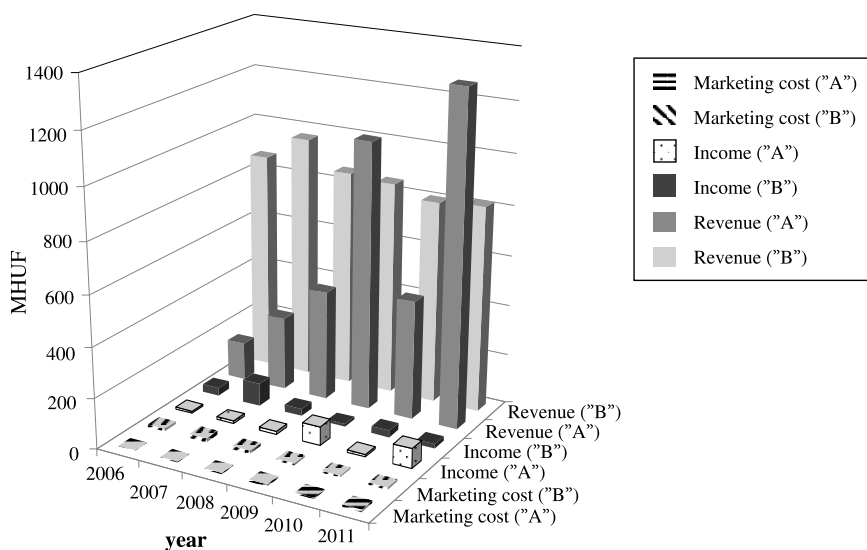


Figure 1. The time variation of the examined three variables in the two companies

Correlation between marketing costs and revenue

Revenue is not only influenced by the company but the influence of the market is also dominant. Revenue strongly depends on the demand for the product, on the successful sales of the product and on the price level compared to the price level accepted by the market. According to our examination, there is a stronger correlation between marketing costs and revenue than between marketing costs and earnings. The coefficient of correlation for marketing costs and revenue is $r = 0.76$, which is considered strong. The value of the coefficient of determination is almost 60% ($d = 58\%$), which also shows that marketing costs have a great impact on revenue. Curvilinear regressions have been fitted to describe the correlation between the marketing costs and revenue for each company (*Figure 2.a* showing for company "A" and *Figure 2.b* showing for company "B").

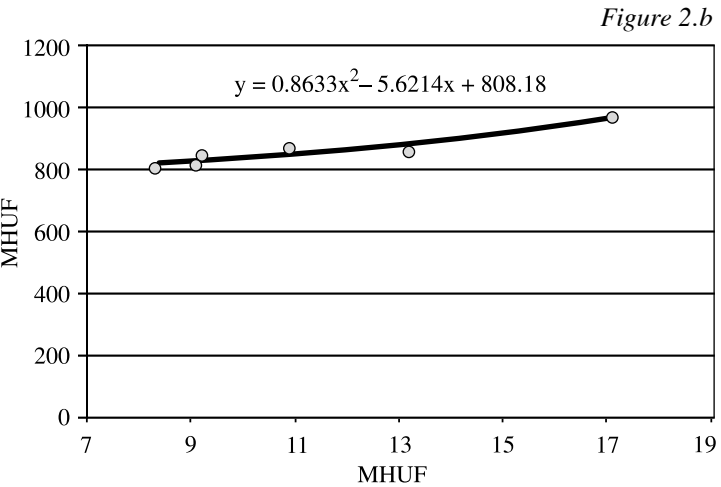
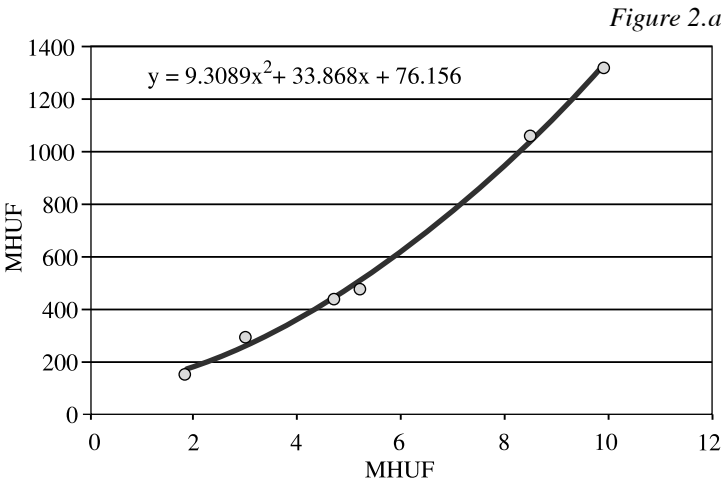


Figure 2. The correlation between the marketing costs and revenue of company "A" (*Figure 2.a*) and of company "B" (*Figure 2.b*)

A quadratic curvilinear regression may be fitted to describe the correlation between the marketing costs and revenue of company "A" (Figure 2.a):

$$y = 9.3x^2 + 33.9x + 76.1$$

The same was done for company "B", the equation of the curvilinear regression is (Figure 2.b):

$$y = 0.86x^2 - 5.6x + 808.2$$

Generally marketing costs have a great influence (quadratic function) on revenue for both companies.

Analysing the time variation of the revenue and the marketing costs for each company, we see that in company "A" the revenue is strongly fluctuant, however the moving average showing its tendency is rather increasing. Also the marketing cost grew in the examined period, by more than 1.45 units (MHUF) on yearly average. In company "B" the revenue is fluctuant, however the moving average showing its tendency is decreasing. The marketing costs decreased in the examined period, by approximately 1.1 units (MHUF) on yearly average. (Figure 3.a and Figure 3.b)

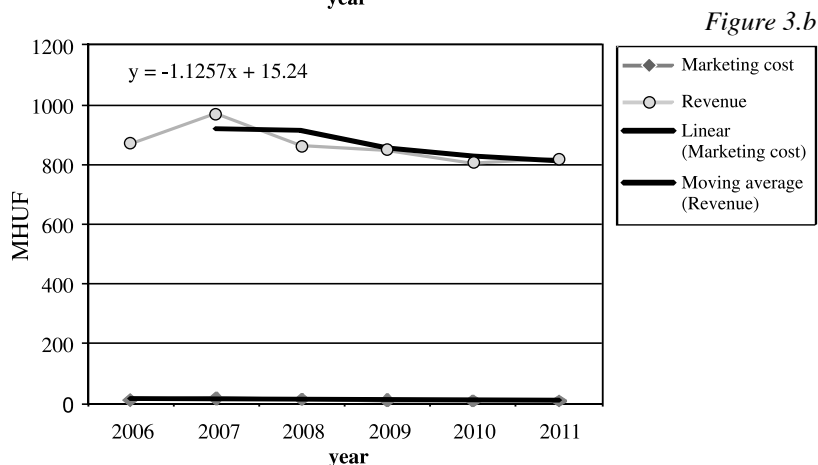
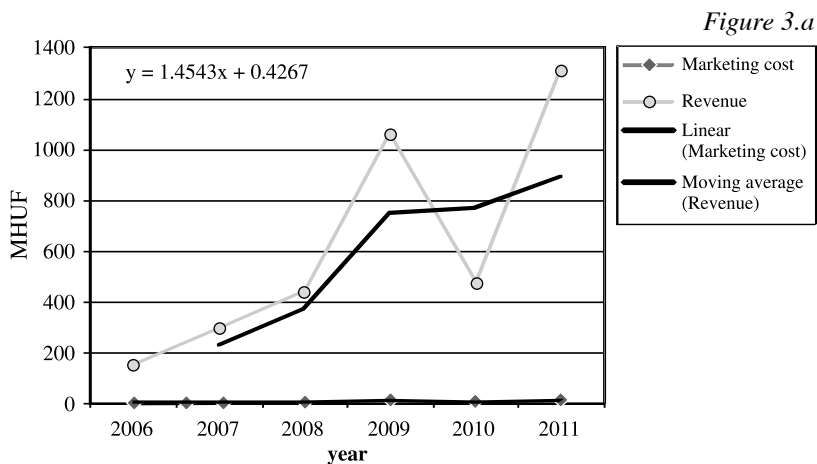


Figure 3. The time variation of the marketing costs and revenue of company "A" (Figure 3.a) and of company "B" (Figure 3.b)

Correlation between marketing costs and income

Based on the calculations using the data of the analysed six years, the value of the coefficient of correlation is $r = 0.67$. This means that there is a stronger than medium correlation between marketing costs and income. From the calculated coefficient of determination, we see that marketing costs have an impact on earnings of 45%.

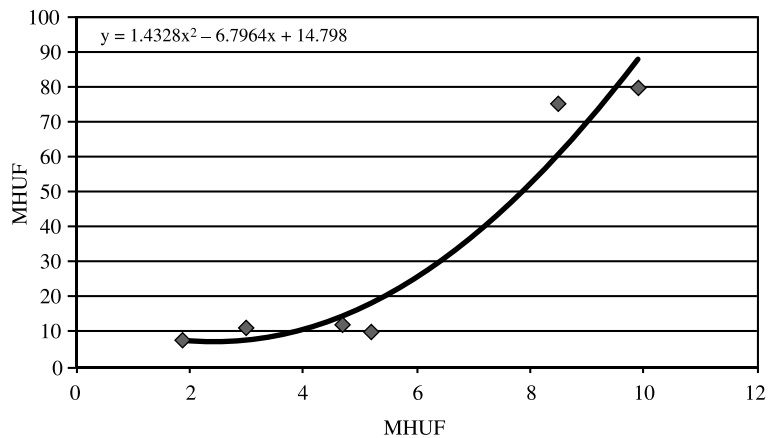


Figure 4.a. The correlation between marketing costs and earnings in company "A"

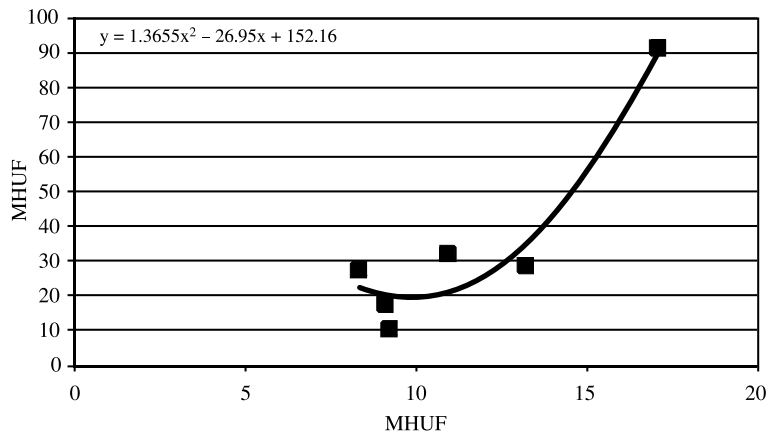


Figure 4.b The correlation between marketing costs and income in company "B"

In company "A" a quadratic curvilinear regression was fitted to describe the correlation between the marketing costs and income (Figure 4.a):

$$y = 1,4x^2 - 6,8x + 14,8$$

In company "B", the equation of the curvilinear regression is (Figure 4.b):

$$y = 1,4x^2 - 27,0x + 152,2$$

On the whole marketing costs have a great influence (quadratic function) on income for both companies.

Time variation of the examined factors

Further analysis aimed at the time variation of the earnings and the marketing costs for each company. (In the Figures the years are numbered, which is to say 1 = 2006, 2 = 2007, 3 = 2008, 4 = 2009, 5 = 2010, 6 = 2011.)

In company "A" with the exception of year 2011, the income is of a growing tendency, same as the increasing tendency of the marketing costs. (Figure 5.a)

In company "B" it was just the contrary. (Figure 5.b)

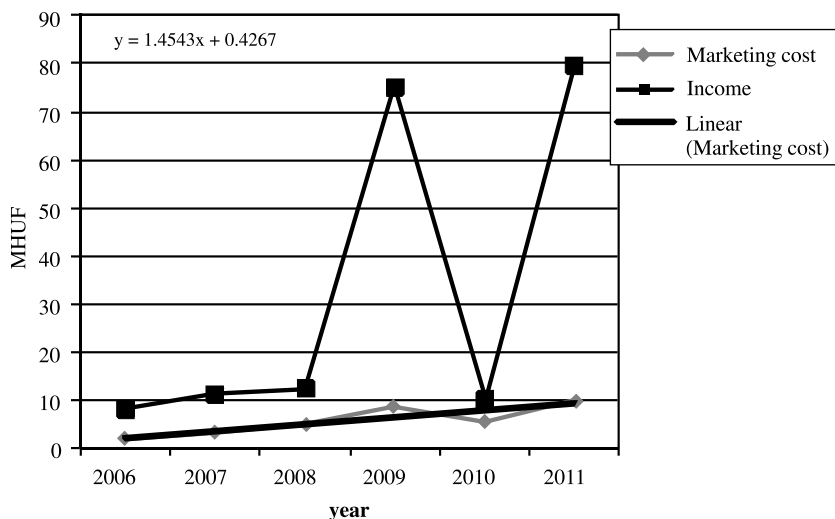


Figure 5.a The time variation of marketing costs and income in company "A"

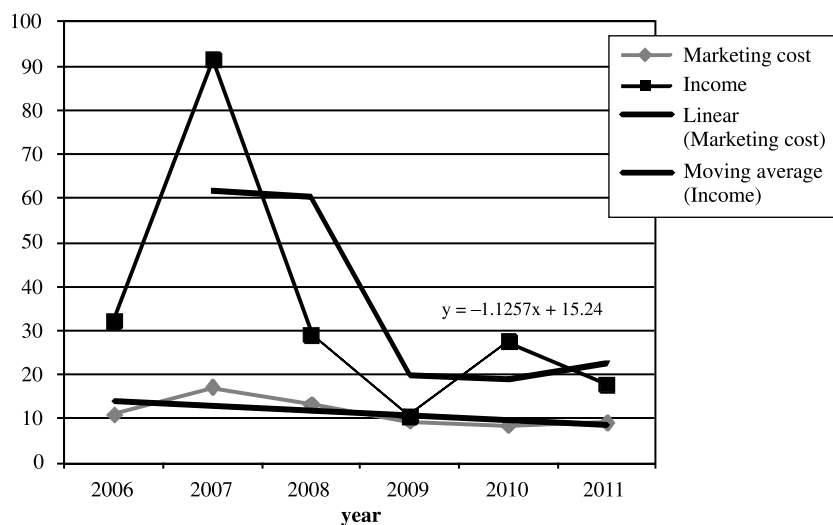


Figure 5.b The time variation of marketing costs and income in company "B"

On the whole it can be stated that if the data of the two companies (that are representing together two-third of the broiler fodder supply equipment branch) are examined together, there is a strong relation ($r = 0.81$) between the marketing costs and income, which can be expressed by a quadratic curvilinear regression. (*Figure 6.*)

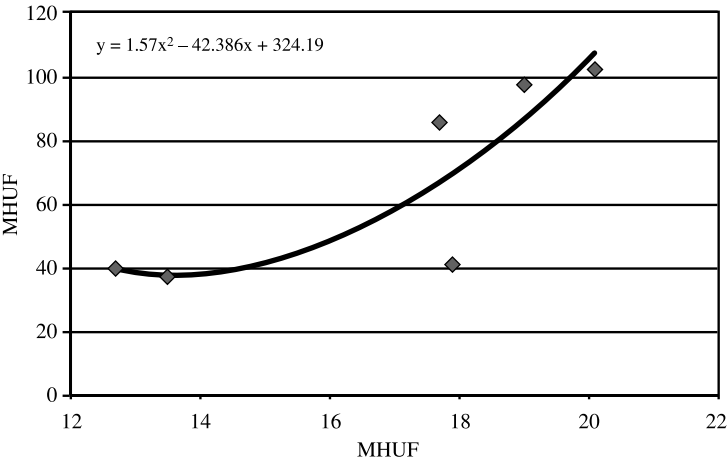


Figure 6. The correlation between the marketing costs and income for the two companies together

It can be seen from *Figure 7.* that the correlation between the marketing costs and revenue is not that strong, it can be considered of medium strength ($r = 0.53$) in the companies covering two-third of the broiler fodder supply equipment market.

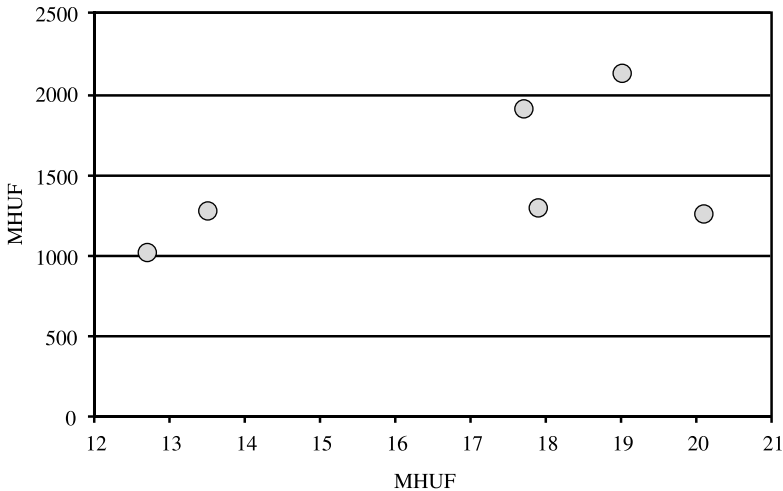


Figure 7. The correlation between the marketing costs and revenue for the two companies together

On the whole it can be concluded that marketing costs are expenses that are generating a positive effect from economic point of view as they have an advantageous impact on both the revenue and earnings.

The *hypothesis* phrased at the beginning of the examinations *stating that: marketing and the related expenses spent on the activities of the national distributors involved in the sales of fodder supply equipment are differently emphasised by the companies but their impact on the profitability of the companies is significant – is partially correct*. However, the examination did not prove the significant correlation among marketing costs and income as well as revenue. Yet the calculations of correlation show a stronger than medium correlation with regard to the examined input (marketing cost) and output (revenue and earnings) factors, thus there is a stronger than medium effect between the marketing expenses and profitability. This means that in case of unchanged conditions the increase of the allocated marketing costs has a positive effect on the business earnings of the fodder supply equipment distributors. Knowing this it is highly recommended to strengthen the marketing activity of the companies (that will of course also mean the increase of the marketing expenses), to broaden the circle of the used marketing communication tools and to improve the quality of those. The expertise and correctness of the sales person is of special importance during the personal sales activity. Furthermore, the continuous education of clients is also a must whether during personal sales or by professional articles, by experts' advice.

CONCLUSIONS

The fact that the core strategy of the two examined companies is rather different does not prevent them from being market leaders in the national broiler fodder supply equipment market. In company "A" it is of product development whereas in company "B" it is differentiation. Not only their core strategies differ but their marketing strategies are also different, which can primary be seen in the priority ranking of the strategic elements (factors). The amount of money spent on marketing and the time variation is also different. Marketing activities are considered of high importance at both companies and the companies are ready to allocate financial means for the improvement of the marketing activities as much as possible. However, an important question is: to what extent do the marketing costs increase the achieved business results: revenue of the companies and their income? The surveys of the six years (2006–2011) and the mathematical-statistical analyses done confirm that:

1. In both companies there is a stronger than medium correlation between marketing costs and sales revenue as well as the earnings.
2. As the correlation can be described by quadratic functions there is a possibility to optimize the marketing costs under given circumstances (this requires further economical analyses).
3. As the market conditions change all the time, this forces the distributors to continuously keep their marketing strategies (and marketing expenses) "up-to-date". Without doing that they cannot stay competitive, which threatens their market leader position.

A marketingköltségek hatása a brojler takarmányozási eszközöket forgalmazó cégek árbevételére és jövedelmére

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ÖSSZEFOGLALÁS

A különféle piaci szereplők marketingtevékenysége nemcsak szervezési, hanem anyagi kérdés is. Mind a szervezés területén, mind pedig az anyagi ráfordítások (marketingköltségek) tekintetében alapvető szempont a segítségükkel elérhető piaci versenypozíció, végső soron az ágazat árbevételének és jövedelmének növelése.

A brojlertermelés a hazai állattenyésztésnek szinte egyedüli ágazata, amelyik az utóbbi évtizedben növelni tudta a termelését. Az ágazat abból a szempontból is különleges, hogy műszaki felszereltsége szinte komplexnek mondható. Ez annak ellenére így van, hogy a telepek egy részénél (a szakirodalom szerint mintegy 50%-ánál) a berendezések állapota nem felel meg a korszerű követelményeknek. Maga az ágazatnövekedés, valamint a korszerűtlen eszközök kényszerű cseréje potenciális lehetőség az eszközforgalmazók számára.

Az ágazatban folyamatosan jelenlevő potenciális közölgények zökkenőmentes kielégítése megfelelő piaci tevékenységet követel a forgalmazóktól, aminek alapvető eleme a hatékony marketingmunka.

A hazai brojler-takarmányozási eszközforgalom kétharmadát képviselő két vizsgált cég marketingstratégiájának látható különbségei ellenére abban megegyeznek, hogy piaci részesedésük bővítését egyaránt elsődleges szempontnak tekintik. E cégeknél 2006–2011 között folytatott kérdőíves felmérésből az is megállapítható, hogy eltérően ítélik meg az általuk alkalmazott marketingstratégia főbb tényezőinek fontossági sorrendjét. Ennek következtében a marketingtevékenységre fordított költségeik volumene is eltérő. Ami mindkét cégnél közös törekvés, hogy a marketingre fordított összegeknek az elért eredményben meg kell térülnie.

A költséghatékonyság alakulásának vizsgálati eredményei azt bizonyítják, hogy mindkét cégnél közepesnél szorosabb kapcsolat (korreláció) mutatkozott a marketingköltségek, valamint az értékesítés árbevétele, illetve a realizált eredmény között. Miután ezeket a kapcsolatokat másodfokú függvények írják le, így – adott viszonyok mellett – lehetőség van a marketingköltségek optimalizálására. A kapott eredmények megítélésakor figyelembe kell venni azt, hogy az alkalmazott modellek statikusak, ezért csakis változatlan feltételekre igazak.

Kulcsszavak: marketingstratégia, takarmányellátó berendezés forgalmazók, marketingköltségek, értékesítési árbevétel, jövedelem, korrelációs számítás, versenyképesség.

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